"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

USMANOV, Kh.U.; YUL'CHIBAYEV, A.A.; MUKHAMEDZHANOV, R.; GORDIYENKO, A.A.; PATENKO, A.A.; DORDZHIN, G.S.; VALIYEV, A.

Radiation-induced polymerization of vinyl fluoride. Khim. i fiz.-khim. prirod. i sint. polim. no.1:206-208 '62 (MIRA 18:1)

1. Chlen-korrespondent AN UzSSR (for Usmanov).

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

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USMANOV, Kh.U.; YUL'CHIBAYEV, A.A.; MUKHAMEDZHANOV, R.; GORDIYENKO, A.A.; VALIYEV, A.; PATENKO, A.A.; DORDZHIN, G.S.

Radiation polymerization of vinyl fluoride. Vysokom.soed. 5 no.8:1277 Ag '63. (MIRA 16:9)
(Vinyl compounds) (Polymerization) (Radiation)

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L 3993-66 EWP(e)/EWT(m)/EPF(c)/EWP(i)/EWP(j)/EWP(b)/EWA(c) RPL

ACC NR: AP5025675 UR/0286/65/000/018/0025/0025
547.321.07

AUTHOR: Usmanov, Kh. U.; Yul'chibayev, A. A.; Kordshin, G. S.; Patenko, A. A.; Asamov, M. K.

TITLE: Preparative method for vinyl fluoride. Class 12, No. 174622

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 25

TOPIC TAGS: vinyl fluoride

ABSTRACT: An Author Certificate has been issued for a preparative method for vinyl fluoride. The method involves the reaction of acetylene with hydrogen fluoride (1/1.5 molar ratio) in the presence of aluminum fluoride catalyst on heating. To increase the vinyl fluoride yield, the reactants are passed through a 15/1 aluminum fluoride/graphite mixture which had been pre-saturated with hydrogen fluoride, at about 380C. [SM]

ASSOCIATION: none

SUBMITTED: 11Dec64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4120

Card 1/1

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORDZHIYEV, B.S.; KIRBASOVA, M.B.; MUSHANOV, S.P.; MANZHIKOVA, R.M.; CHERNOUSOV, I.P.; KIYEVSKAYA, V.I.; DZHELACHINOV, E.B., red. GAYDASH, Ya., tekhn. red.

[Economy of the Kalmyk A.S.S.R.; statistical collection] Narodnoe khoziaistvo Kalmytskoi ASSR; statisticheskii sbornik. Elista, Kalmytskoe knizhnoe izd-vo, 1960. 107 p. (MIRA 14:8)

1. Kalmuck A.S.S.R. Statisticheskoye upravleniye. 2. Kollektiv rabotnikov Statisticheskogo upravleniya Kalmytskoy ASSR (for all except Gaydash). 3. Nachal'nik Statisticheskogo upravleniya Kalmytskoy ASSR (for Dzhelachinov)
(Kalmyk A.S.S.R.—Statistics)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

WEINRICH, Gunther; MIHAILESCU, Ioan; NEGOITA, Constantin; DORE LANDAU, Ioan

Constructive achievements of transistor blocks in the unified regulating system for the UNIDIN electric proceadings. Probleme automatis 4:247-260 '61.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DOREMBOWICZ, M.

Export of bacon and sine breeding p. 19. GASPODARKA MIESNA, Warszawa Vol. 8, no. 4, Apr. 1956

SOURCE: East European Accessions List (EEAL) Library of Congress Vol. 5, no. 8, August 1956

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORENSKIY, A.F., inzh.

Efficient method for determining the location of gas penetration into the water system of 2D100 diasel engines. Elek. i tepl. tiaga 9 no.11:16 N '65. (MIRA 19:1)

1. Depo Krasnoufimsk Gor'kovskoy dorogi.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORENSKIY, B. (g. Vil'nyus).

Help for automobile owners. Prom.koop. no.6:20 Je '57. (MLRA 10:7)

1. Predsedatel' pravleniya arteli "Kibirkshtis."
(Automobiles--Repairing)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DOBRINSKIY, Leonid Mikhailevich; IOFIS, Ye.A., kandidat tekhnicheskikh nauk, redaktor; TELESHEV, A.N., redaktor; MATISSEN, Z.M., tekhnicheskiy redaktor.

[Photography of sports] Fotografirovanie sporta. Pod red. E.A.Iofisa. Moskva, Gos.izd-vo "Iskusstvo".No.7. 1955. 117 p. (MLRA 9:5)
(Photography of sports)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

LORENSKII, L. M.

Effect of movement on photographs. Sov.foto 18 no.10:41-46 O '58.

(Photography) (MIRA 11:11)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORENSKIY, Leonid Mikhaylovich; IOFIS, Ye.A., kand.tekhn.nauk,red.;
FOMIN, A.A., red.; PEREGUDOVA, M.T., tekhn. red.

[Dynamism of the photographic image]Dinamichnost' fotokadra.
Pod red. E.A.Iofisa. Moskva, Izd-vo "Iskusstvo," 1962. 143 p.
illus. (Biblioteka fotoliubitelia, no.27) (MIRA 15:9)
(Photography of sports)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

YELENIN, S.N.; DORMENSKIY, M.I.

Apparatus for washing the sand of slow filters. Vod.i san. tekh. no.8:33-34 Ag '60. (MIRA 13:7)
(Filters and filtration)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

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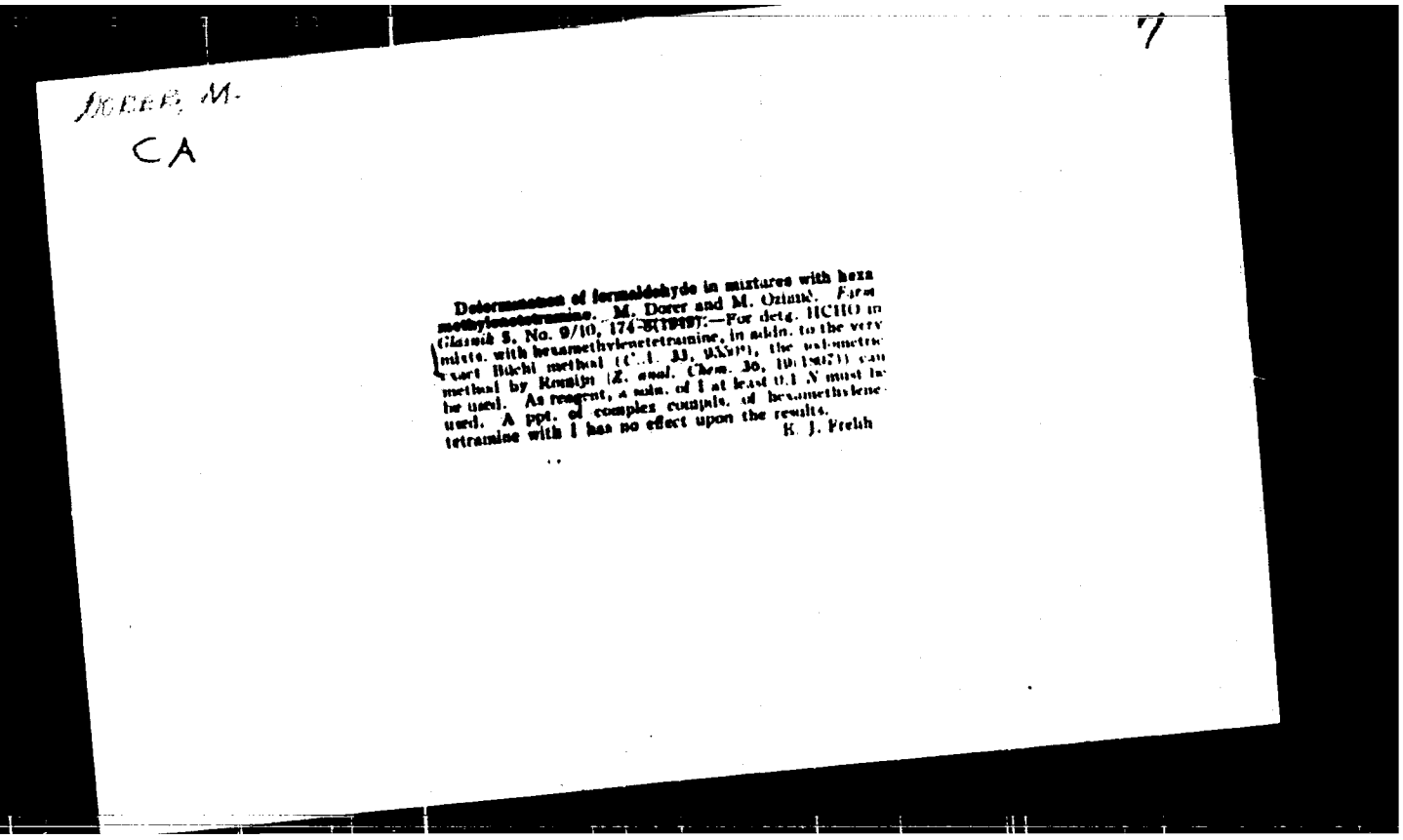

7

DORER, M.

CA

Determination of formaldehyde in mixtures with hexamethylenetetramine. M. Dorer and M. Oziuk. *Farm. Glasnik* 5, No. 9/10, 174–5(1949).—For detg. HCHO in mixts. with hexamethylenetetramine, in addn. to the very short Bichi method (*C.A.* 33, 9330), the volumetric method by Romijn (*Z. anal. Chem.* 36, 10(1897)) can be used. As reagent, a soln. of I at least 0.1 *N* must be used. A ppt. of complex compds. of hexamethylenetetramine with I has no effect upon the results.

K. J. Frelih

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORER, M.

Determination of bellalumal and bellasecal. Acta pharm. jugosl. 3 no.2-3:155-161 1953.

1. Laboratorij za kontrolo zdravil in farmacevtske raziskave, Centralni Higijenski Zavod Ljubljana. Primljeno: 6.V.1953.

(BARBITURATES, determ.
*phenobarbital in bellalumal & bellasecal)
(BELLADONNA, determ.
*in bellalumal & bellasecal)
(ERGOT ALKALOIDS, determ.
*in bellasecal)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

CZECHOSLOVAKIA/Chemical Technology - Chemical Products and Their Application. Medicinal Substances. Vitamins. Antibiotics. H-17

Abs Jour : Ref Zhur - Khimiya, No 17, 1958, 58432

Author : Dorer, M.

Inst :

Title : Determination of Atropine and Luminal in "Bellalumal" Suppositories.

Orig Pub : Farmac. vest., 1956, 7, No 7-8, 96-98

Abstract : Cocoa oil is eliminated from a suppository by petroleum ether, 0.1 n. H_2SO_4, atropine (I) is extracted, then 10% Na_2CO_3 luminal (II). I is transformed by the usual means into chloroform, distilled, dissolved in aqueous alcohol, and titrated with 0.1 n. HCl. II is directly determined in a solution of argentometric soda.

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KORN, I.

Change of volume in the hardening of gypsum and the influence of exterior and interior factors on the firmness of gypsum casts; a contribution to the study of the characteristics of gypsum. p. 1.

PRIROD. (Hrvatsko prirodoslovno drustvo) Zagreb, Yugoslavia.
Vol. 8, no. 1, 1958.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, no. 8, Aug. 1959
Uncl.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORER, M.

Development of the problem of gypsum through decades. p. 50.

NOVA PROIZVODNJA. (Zveza drustev inzenirjev in tehnikov LRS) Ljubljana, Yugoslavia, Vol. 10, no. 1, 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 6, June 1959.

Uncl.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

GVINIANIDZE, T.; DOREULI, N.

Transport and intraregional communications of the Adzhar A.S.S.R. Trudy Inst. geog. AN Gruz. SSR 19:155-169 '62. (MIRA 16:1)

(Adzharistan—Transportation)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DOREV, Khr.

STANEV, St.

Bulgaria

No degree listed

Sofia Chemico-Pharmaceutical Plant

Sofia, Farmatsiya, No 5, September-October, 1962, pp 29-34.

"On a Method for Producing Hydrazinsulfate"

Co-authors:

GOSPODINOV, N., Sofia Chemico-Pharmaceutical Plant.

DOREV, Khr., Sofia Chemico-Pharmaceutical Plant.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DOREZIL. L.

Determining the value of Fischer's regent.

P. 362 (Chemicky Prumysl. Vol. 7, no. 7, July 1957, Praha, Czechoslovakia)

Monthly Index of Fast European Accessions (EFAI) LC. Vol. 7, no. 2, February 1958

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DOREZYUK, N.I.; KAPTSOV, L.N.

Self-oscillatory system involving a four-layer diode. Vest. Mosk. un. Ser. 3:Fiz., astron. 18 no.2:58-66 Mr-Ap '63. (MIRA 16:6)

(Diodes) (Oscillators, Electric)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORF, A.B., inzhener.

Characteristics of planning production bases in new building districts. Stroi.prom. 34 no.10:21-25 O '56. (MIRA 9:12)
(Construction industry)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORF, A.B., inzhener.

Washing and grading plants at sand and gravel pits in the U.S.A. (MIRA 10:10)
Stroi.prom. no.8:46-49 Ag '57.
(United States--Quarries and quarrying)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORF, G.A., inzh.; YURENKOV, V.D., kand. tekhn. nauk

Speed of voltage recovery in power systems and requirements of 110-220 kv. switches. Elek. sta. 36 no.11:54-59 N '65.
(MIRA 18:10)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

SOV/105-58-11-13/28

8(2)

AUTHORS: Yurenkov, V. D., Candidate of Technical Sciences, Dorf, G. A., Engineer

TITLE: Excess Voltage Recorder for 6 and 10 kV Grids (Registrator urovnya perenapryazheniy v setyakh 6 i 10 kv)

PERIODICAL: Elektrichestvo, 1958, Nr 11, pp 78-82 (USSR)

ABSTRACT: This is a description of an instrument for recording overvoltage magnitudes. It is applied to measurements of atmospheric and internal excess voltages in 6 and 10 kV grids. It was developed in the Vsesoyuznyy nauchno-issledovatel'skiy institut elektroenergetiki (All-Union Scientific Research Institute of Electrical Power Engineering). The device is composed of the following main parts, which are connected in series: 1) limiting capacitances, 2) three-phase spherical lightning arrester and 3) a three-phase instrument which records the tripping. The apparatus and its mode of operation are described in detail. During the first half of 1957 five such instruments were installed in the Moscow city power supply system. A comparison of the excess voltages recorded with an oscillograph and of those recorded with this instrument showed

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

that the apparatus operates correctly. There are 6 figures, 2 tables, and 2 Soviet references.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut elektroenergetiki (All-Union Scientific Research Institute of Electrical Power Engineering)

SUBMITTED: June 19, 1958

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORF, G.A., inzh.

Use of high-speed electronic computers in calculating voltage regeneration. Trudy VNIIE no.15:106-118 '63. (MIRA 16:12)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORF, G.A., inzh.

Voltage recovery at cutout contacts during the switching of short-circuited lines. Elektrichestvo no.3:56-60 Mr '64. (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektroenergetiki.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

LOI'USHANSKIY,V.Ye.; DORF,G.K., redaktor; ANDREYEV,S.P., tekhnicheskiy redaktor

[Safety devices and installations used in iron mine safety engineering] Predokhranitel'nye ustroistva i prisposobleniia po tekhnike bezopasnosti na zheleznykh rudnikakh. Khar'kov, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1955. 147 p. (MLRA 9:3)
(Iron mines and mining--Safety measures)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

VASIL'YEV, Yevgeniy Alekseyevich; DORF, G.K., otv. red.; FROLOVA, Ye.I., red. izd-va; IL'INSKAYA, G.M., tekhn. red.

[Electric mine locomotive engineer] Mashinist rudnichnogo elektrovoza. Izd.2., perer. i dop. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1960. 299 p. (MIRA 14:11)
(Mine railroads) (Automatic control)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

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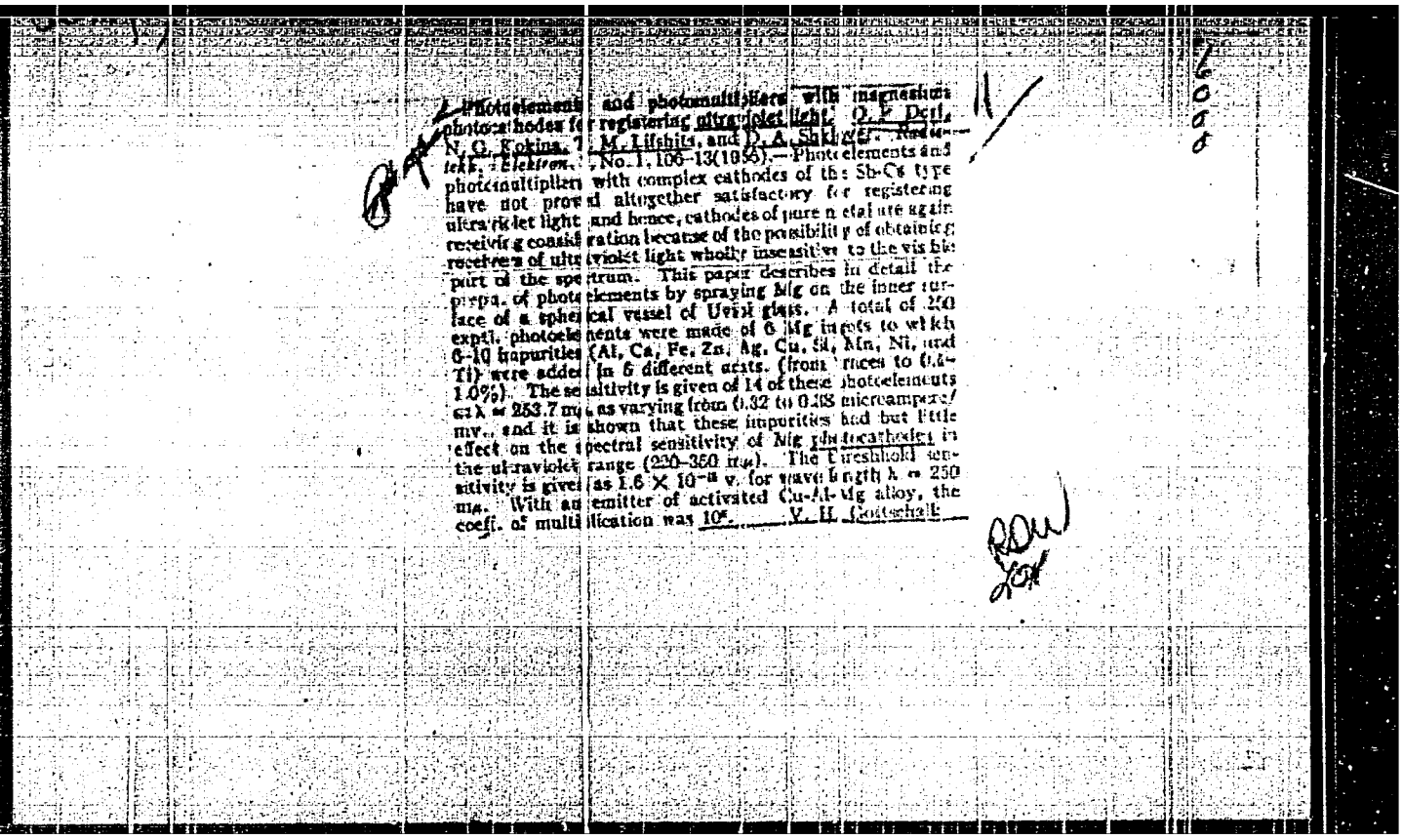

Photoelements and photomultipliers with magnesium photocathodes for registering ultraviolet light. O. V. Dett, N. G. Fokina, T. M. Lifshits, and D. A. Shklyaev. *Radiotekh. i Elektron.*, No. 1, 106–13(1956).—Photoelements and photomultipliers with complex cathodes of the Sb-Cs type have not proved altogether satisfactory for registering ultraviolet light and hence, cathodes of pure metals are suggested for receiving consideration because of the possibility of obtaining receivers of ultraviolet light wholly insensitive to the visible part of the spectrum. This paper describes in detail the preparation of photoelements by spraying Mg on the inner surface of a spherical vessel of Uviol glass. A total of 250 exptl. photoelements were made of 6 Mg ingots to which 6–10 impurities (Al, Ca, Fe, Zn, Ag, Cu, Si, Mn, Ni, and Ti) were added in 6 different ratios (from traces to 0.6–1.0%). The sensitivity is given of 14 of these photoelements at $\lambda = 253.7$ mμ, as varying from 0.32 to 0.48 microamperes/mv., and it is shown that these impurities had but little effect on the spectral sensitivity of Mg photocathodes in the ultraviolet range (230–360 mμ). The threshold sensitivity is given as 1.6×10^{-8} v. for wavelength $\lambda = 250$ mμ. With an emitter of activated Cu-Al-Mg alloy, the coeff. of multiplication was 10^6. V. H. Gottschalk

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORF, O.P.

USSR/Optics - Photometry. Colorimetry. K-10

Abs Jour : Referat Zhur - Fizika, No 3, 1957, 8090

Author : Shklover, D.A., Dorf, O.P.
Inst : All-Union Illumination Engineering Instutute, USSR.
Title : Photoelectric Instrument for Measurement of Ultraviolet Radiation.

Orig Pub : Svetotekhnika, 1956, No 3, 20-24

Abstract : Two types of ultraviolet-meters were developed, UFM-3 and UFM-4, equipped with Sb-Cs photomultipliers with ultraviolet transmitting glass windows. In the UFM-3, a Zn_2SiO_4 luminophor is placed in front of the cathode of the photomultiplier. The UFM-4 is intended for the control of the radiation of ultraviolet sources during manufacture. It permits estimating the energy of the illumination, produced by a source in the 320 -- 400, 280 -- 320, and 240 -- 280 mμ regions, and also to estimate the bactericidal and erythemic action in

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

USSR/Optics - Photometry. Colorimetry. K-10

Abs Jour : Referat Zhur - Fizika, No 3, 1957, 8090

corresponding units. This is effected by changing the light filters. After a single stage of pointer microammeter M-24 with a range of 100 μ amp. The sensitivity can be varied by a factor of 1,000 using input resistances of the amplifier. Also developed were the instruments UFM-5 and UFM-6, which employ circuit with charge-storage using a capacitor. They are equipped with magnesium and Sb-Cs photocells. The electric circuit of the UFM-5 is given. This instrument measures very small intensities, both integral (with respect to time) and averaged over 15 -- 20 seconds. The sensitivity of the instruments is 0.5 μ w/cm^2.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORF, O. P. Cand Tech Sci -- (diss) "The Photometry of Ultraviolet Radiation." Mos, 1957. 16 pp 20 cm. (Min of Higher Education USSR, Mos Order of Lenin Power Engineering Inst im V. M. Molotov), 100 copies (KL, 26-57, 108)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

[redacted] inzhener.

Temperature characteristics of light filters for the ultraviolet spectral region. Svetotekhnika 3 no.3:21-23 Mr '57. (MIRA 10:3)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Light filters) (Spectrum, Ultraviolet)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORF, O. P.

75. **Study of Measurement of Ultraviolet Radiation Sources**

"Spectral and Integral Measurements of Sources of Ultraviolet Radiation," by Engr O. P. Dorf, All-Union Scientific Research Illuminating Engineering Institute Svetotekhnika, No 4, Apr 57, pp 9-14

This article proposes methods of measuring the absolute spectral distribution of the energy of sources of radiation in the ultraviolet portion of the spectrum, and also a method of calibrating integrating type ultraviolet meters, which permit measurements in units of radiant force.

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The photoelectric methods (which ensure obtaining spectral measurements of the highest accuracy), the instruments, the procedures, and results of the work are described.

The proposed methods can be used to obtain an evaluation of radiation sources under laboratory conditions in plants manufacturing ultraviolet lamps and also in irradiating units. "In this connection, absolute measurements in the ultraviolet portion of the spectrum cannot be obtained without the use of calibrating lamps, and the problem of developing native calibrating devices for ultraviolet sources requires an immediate solution." (U)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORF, O. P.

Dissertation

"The Photometry of Ultraviolet Radiation, Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 9, pp. 1143-1143 (USSR).

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORF, O.P.; RYMOV, A.I.; SHKLOVER, D.A.

Spectral characteristics of sources and receivers of ultraviolet radiation. Fiz.sbor. no.4:190-195 '58. (MIRA 12:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy svetotekhnicheskiy institut.
(Spectrum, Ultraviolet)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

S/137/62/000/001/065/237
A060/A101

AUTHORS: Radomysel'skiy, I. D., Dorf, Z. P.

TITLE: The economic efficiency of the introduction of metallo-ceramic articles

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 42, abstract 1G320 ("Poroshk. metallurgiya", 1961, no. 1, 92-98, English summary)

TEXT: The authors cite the results of the development of the metallo-ceramic article requirements at 266 industrial enterprises of the Ukraine. The total requirements constituted 20.2 thousand tons in 1960 and will attain 36.4 thousand tons by 1965. About 90% of the total requirement is in the domain of metallo-ceramic materials for general machine construction (structural and anti-friction articles). The nomenclature of all articles includes 7,699 denominations with a yearly output of 161.6 million pieces with average weight ~125 g. The economic efficiency of the introduction of metallo-ceramic articles is determined by saving of heavy and light metals, by freeing of machinery and labor, by economies in the daily production. The nominal yearly saving caused by the introduction of articles fabricated by the methods of powder metallurgy

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The economic efficiency ...

constitutes ~ 21 million rubles (according to the new prices); there is also a saving of 40,000 tons of metal, a freeing of 3,695 workers and 1,865 metal-cutting machines. **Profitableness** of the capital investment required by the construction of a plant for producing metallo-ceramic articles will be attained in 1.5 - 2 years.

R. Andriyevskiy

[Abstracter's note: Complete translation]

Card 2/2

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

KLIMENKO, V.N.; RADOMYSEL'SKIY, I.D.; DORF, Z.P.

Department for the manufacture of ceramic-metal instrument parts. Porosh.met. 2 no.1:80-87 Ja-F '62. (MIRA 15:8)

1. Institut metallokeramiki i spetsial'nykh splavov AN UkrSSR.
(Instrument manufacture) (Ceramic metals)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORF, Z.P.; DENISENKO, E.T.

Economic efficiency of using ceramic metal compacting materials in steam turbines. Poroch. met. 5 no.4:83-87 '65. (MIRA 18:5)

1. Institut problem materialovedeniya AN Ukr.SSR.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DÖRFL, J.; REMS, J.

On the vascular supply of the ear ossicles. Cesk. otolaryng. 14 no.4:243-246 Ag '65.

1. Anatomicky ustav (prednosta prof. dr. J. Kos) a klinika nemoci usnich, nosnich a krcnich (prednosta prof. dr. F. Kotyza) lekarske fakulty Karlovy University v Plzni.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORFL, Josef

Vascularization of the periosteium of flat bones in newborn infants and adults. Cesk. morf. 10 no.3:282-288 '62.

1. Anatomicky ustav lekarske fakulty UK v Pizni, prednosta prof. MUDr. Jaroslav Kos.
(PERIOSTEUM blood supply) (INFANT NEWBORN anat & histol)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORFL, Josef

Contribution to the formation of the periostal bone and its blood-vessel architectonic in an embryo and in a newly-born. Cesk. morf. 12 no.1:1-9 '64.

1. Anatomicky ustav lekarske fakulty KU v Plzni; prednosta: prof. MUDr. Jaroslav Kos.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

POSNIK-LAMBERT, Maria; DORFLER, Bogdan

Experimental colony for the rehabilitation of children with structural and postural defects. Pediat. polska 34 no.7:993-998 July 59.

1. Z Przychodni Miedzyszkolnej w Szczecinie Kierownik Przychodni: lek. M. Posnik-Lambert.
(REHABILITATION)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

BIRYUKOV, V.V.; KAFAROV, V.V.; Prinimali uchastiye: NOSOV, Yu.I.; DORFMAN, A.D.

Mathematical modeling of vapor-liquid heat exchangers. Khim.prom. no.12:908-914 D '63. (MIRA 17:3)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

ACCESSION NR: AP4026963

S/0258/64/004/001/0134/0140

AUTHORS: Dorfman, A. G. (Dnepropetrovsk); Leytes, S. D. (Dnepropetrovsk)

TITLE: Stability of an eccentrically compressed tubular rod of elastic-plastic material

SOURCE: Inzhenernyy zhurnal, v. 4, no. 1, 1964, 134-140

TOPIC TAGS: stability, eccentrically compressed tubular rod, elastic-plastic material, hinged supported rod, concentric circular boundaries, longitudinal force, ideal ring section, infinitely thin wall, axial pressure, elastic-plastic flexure, yield point, elasticity modulus, elastic core

ABSTRACT: A hinged supported tubular rod with ideal elastic-plastic properties is compressed by a longitudinal force N applied with eccentricity a. The rod's cross section is bounded by two concentric rings, and the possibility of local stability loss of the wall is excluded. Approximate expressions are used for the curvature, axial pressure is neglected, and the approximate study of stability is based on the assumption that the curved axis of the rod is in the form of a half-

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ACCESSION NR: AP4026963

wave sinusoid. The cases of one- and two-sided fluidity are treated, and the results are given in the form of a graph of the dependence of critical stresses σ_4 on the depth of the rod λ for fixed values of the eccentricity ν. Orig. art. has: 4 figures, 24 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 10Aug62 DATE ACQ: 15Apr64 ENCL: 00

SUB CODE: AP NO REF SOV: 000 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORFMAN, A.G. (Dnepropetrovsk)

Nomograph for determining the free length of a centrally compressed rod with elastic supports. Stroi. mekh. i raschet. sooruzh. 5 no.6:39-41 '63 (MIRA 17:7)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

Dorfman, A. G. Transformation of the equation of defor-

these Rev. 12. 531]. There the concept of relative rigidity

Russian

These papers form an addition to N. V. Efimov's report on qualitative questions in the theory of deformation of surfaces in the small [Trudy Mat. Inst. Steklov. 30 (1949);

where $f(u, v) = \sum_{i=2}^{n} \ldots$ and $R(u, v)$ is the remainder. Put $\ldots$ If $4\rho_{01}\rho_{11} - \rho^2_{01} \neq 0$ and

$$\rho^2_{11}a_1' - 2\rho_{11}\rho_{01}a_1' + (\rho^2_{01} + 2\rho_{01}\rho_{11})a_1' - 2\rho_{01}\rho_{11}a_1' + \rho^2_{01}a_1' = C_1$$

then S is relatively rigid of at least the first order. The main tool in the proof is the following comparatively simple form of the deformation equation derived in the first paper: If one surface $z = f(u, v)$ with a given line element is known, then any other surface $z(u, v)$ with the same line element satisfies the equation

$$(z_{uu}z_{vv} - z^2_{uv})(f_u^2 + f_v^2) - (f_{uu}z_{vv} - 2f_{uv}z_{uv} + f_{vv}z_{uu})(f_u z_u + f_v z_v) + (f_{uu}f_{vv} - f^2_{uv})(z_u^2 + z_v^2) = (f_{uu}f_{vv} - f^2_{uv}) - (z_{uu}z_{vv} - z^2_{uv}).$$

H. Busemann (Auckland).

Source: Mathematical Reviews, Vol. 13 No. 10

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

USSR.

Dorfman, A. G. Investigation of possibilities of varying the solutions of certain classes of differential equations. Uspehi Mat. Nauk (N.S.) 9, no. 4(62), 167–174 (1954). (Russian)

Problems which arose originally for the deformation equation [see Efimov, Trudy Mat. Inst. Steklov. 30 (1949); MR 12, 531] are discussed here for the following simpler equations:

$$(*)\qquad \begin{aligned} &f_{vv}z_{vv}-2f_{uv}z_{uv}+f_{uu}z_{uu}=0\\ &(z_{uu}z_{vv}-z_{uv}^2)-(f_{uu}f_{vv}-f_{uv}^2)=0\\ &2(z_{uu}z_{vv}-z_{uv}^2)-(f_{uu}z_{vv}-2f_{uv}z_{uv}+f_{vv}z_{uu})=0, \end{aligned}$$

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A.G DORFMAN

of which (*) is geometrically interesting as the equation for infinitesimal (rigid) deformation. Stability, or relative stability of order l, of a solution of one of these equations are defined in exactly the same way as rigidity, or relative rigidity of order l, in case of the deformation equation [see Efimov, loc. cit.]. Consider a solution $f(u, v)$ of the form $f(u, v) = f^{(n)}(u, v) + f^{(n+1)}(u, v) + \cdots$, where $f^{(k)}(u, v)$ is a form of degree k in u, v, and $n \geq 1$. The emphasis is on the cases $n = 3, 4$ which are unsolved for the deformation equation. The following results are of particular interest for differential geometry. If $f(u, v) = f^{(3)} + f^{(4)}$, where $f^{(3)} = a_1u^3v + a_2u^2v^2$, $f^{(4)} = a_1u^4v^4$, $a_1 \neq 0$, then $z = f(u, v)$ possesses at least a two-parameter family of infinitesimal deformations. (This $f(u, v)$ is a solution of the second equation above with relative stability of order 1.) For each $n \geq 4$ there is a surface of the form $z = f(u, v)$ which is relatively rigid of order 1, but is not infinitesimally rigid.

H. Busemann (Paris).

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORFMAN, A.G.

Solution of the deflection equation for some classes of surfaces.
Usp.mat.nauk 12 no.2(74):147-150 Mr-Ap '57. (MIRA 10:7)
(Differential equations, Partial)
(Surfaces, Deformation of)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORFMAN, Abram Grigor'yevich; UGAROVA, N.A., red.; BRUDNO, K.F., tekhn.red.

[Optics of conic sections] Optika konicheskikh sechenii. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1959. 29 p. (Populiarnye lektsii po matematike, no.31) (MIRA 12:8)
(Geometry, Projective) (Cone)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORFMAN, A.Sh.

16(1) PHASE I BOOK EXPLOITATION SOV/2660

Vsesoyuznyy matematicheskiy s"yezd. 3rd, Moscow, 1956

Trudy, t. 4: Kratkiye soderzhaniya sektsionnykh dokladov. Doklady inostrannykh uchenykh (Transactions of the 3rd All-Union Mathematical Congress in Moscow, vol. 4: Summary of Sectional Reports. Reports of Foreign Scientists) Moscow, Izd-vo AN SSSR, 1959. 247 p. 2,200 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Matematicheskiy institut.

Tech. Ed.: O.N. Shevchenko; Editorial Board: A.A. Abramov, V.G. Boltyanskiy, A.N. Tikhonov, B.V. Medvedev, A.D. Myshkis, S.N. Nikol'skiy (Resp. Ed.), A.G. Postnikov, Yu. V. Prokhorov, K.A. Rybnikov, P. L. Ul'yanov, V.A. Uspenskiy, N.G. Chetayev, G. Ye. Shilov, and A.I. Shirshov.

PURPOSE: This book is intended for mathematicians and physicists.

COVERAGE: The book is Volume IV of the Transactions of the Third All-Union Mathematical Conference, held in June and July 1956. The book is divided into two main parts. The first part contains summaries of the papers presented by Soviet scientists at the Conference that were not included in the first two volumes. The second part contains the text of reports submitted to the editor by non-Soviet scientists. In those cases when the non-Soviet scientist did not submit a copy of his paper to the editor, the title of the paper is cited and, if the paper was printed in a previous volume, its location is given. Reference is made to the appropriate volume. The papers, both Soviet and non-Soviet, cover various topics in number theory, algebra, differential and integral equations, function theory, functional analysis, probability theory, topology, mathematical problems of mechanics and physics, computational mathematics, mathematical logic and the foundations of mathematics, and the history of mathematics.

Rybnikov, K.A. (Moscow). The invariance of infinite dimensional homology groups 13

Section on Geometry

Rynols, G.L. (L'vov). On certain problems of geometrography connected with accuracy of graphic computations 75

Gordevskiy, D.Z. (Khar'kov). Incidence axioms of multidimensional projective geometry 75

Norden, A.P. (Stalingrad). Certain problems of local deformability of surfaces 76

Rashevskiy, P.K. (Yerevan). Linear complexes of developing surfaces of a congruence 76

Lopshits, A.M. (Moscow). Fundamentals theorems of the theory of a hypersurface in dimensionless Euclidean space 77

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APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

BING, R.G.; KAZARINOV, N.D. (Madison, Wiskonsin, SShA); KAZHDAN, I.A., (studentka 4-go kursa); MAS'KO, S.S.(studentka 4-go kursa); DORFMAN, A.G. (Gor'kiy); KUZHEL', A.V. (Uman'); SKOPETS, Z.A. (Yaroslavl'); TELESIN, Yu.Z. (Moskva)

Brief notes. Mat.pros. no.6:205-216 '61. (MIRA 15:3)

1. Moskovskiy gosudarstvennyy pedagogicheskiy institut imeni Lenina (for Kazhdan, Mas'ko).
(Mathematics--Problems, exercises, etc.)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

[redacted]

DORFMAN, [illegible], kand. fiz.-mat. nauk (Dnepropetrovsk); LEYTES, S.D., inzh. (Dnepropetrovsk)

Stability in an elastoplastic field of eccentrically compressed rods with asymmetric I-beam and T-beam profiles. Izv. vys. ucheb. zaved.; stroi. no.1435-22 '65. (MIRA 18:10)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DOLFMAN A.S.

Distr: hEM

911. Berman, L. Sh., and Shvets, L. L. Certain particular cases in solving equations for the boundary layer in a compressible fluid (in Russian), *Prik. Mat. Mekh.* 19, 4, 509-512, July/Aug. 1955.

Authors say equations for the boundary layer in a compressible fluid have been solved only for constant stream velocity, i.e. zero pressure-gradient.

They give a solution for a further class of stream velocity distributions, assuming, always, that Prandtl number = 1, viscosity is proportional to temperature, and no heat transfer to body.

They introduce new variables ξ, η, (5) said to be analogous to Dorodnitsyn's variables. Variables ξ, η are related by integral relations with coordinates X, Y and with gas arguments. With help of ξ, η, and a stream function ψ, authors obtain, from general equations, a special form of equation in partial derivatives (16) having the property that for the particular stream velocity distribution $U = cx^m$ (17) which can be transformed into the common differential equation

$$\Phi''' + q\Phi'' \Phi = \frac{2m}{m+1}(\Phi'^2 - 1) \quad (20)$$

where $\Phi(\eta)$ and τ are new variables related to ξ, η, ψ. Authors say (20) is of the same form as the known boundary-layer equation for incompressible fluid for $U = CX^m$, whose solutions are tabulated.

In the exceptional case $m = -1$, equation (20) degenerates into

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DORFMAN, A. Sh.

$$\varphi''' - \varphi'' + 1 = 0 \quad (22)$$

also equal to that of incompressible fluid (have solutions only for $C > 1$, accelerated stress.)

Finally, authors give a transformation permitting a return to the old arguments X, Y. For ideal monoicity of the gas, specially for air $k = 1.4$, solution takes a simple analytical form.

Reviewer notes a parameter α participating in definition of variables (5) is determinated after giving to velocity distribution the special shape (17), and so the constancy of coefficient α maintains that distribution. According to this, authors title their paper, "Certain particular cases . . . ." However, the possibility of varying C and m given to expression (17) certain flexibility and, therefore, reviewer believes, authors' solution may be of practical interest. Their mathematical deductions are done in an elegant manner.

Two bibliographical references in Russian are given.

M. Krinshein, Argentina

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

AUTHORS: Dorfman, A.Sh. and Nazarchuk, M.M. 21-58-5-15/28

TITLE: On the Character of Variation of the Summary Friction Coefficient of Gas Flow in a Cylindrical Tube in the Neighborhood of Maximum Regime (O kharaktere izmeneniya summarnogo koeffitsiyenta poter' pri techenii gaza v tsilindricheskoy trube na rezhimakh, blizkikh k maksimal'nomu)

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1958, Nr 5, pp 528-530 (USSR)

ABSTRACT: Experimental studies by A.F. Gandel'sman, etc, [Ref 1] have established that the local friction coefficient of a gas flow sharply decreases near the output end of the tube when the regime approaches the maximum. In practical calculations, the summary resistance coefficient is often used instead of the local one. The authors, by way of analytical reasoning, show that the summary coefficient also decreases as the regime approaches the maximum, and its value cannot exceed $\frac{\lambda}{k+1}$ at the maximum regime. (Remark: the meaning of the k-symbol was not explained in the article).
There is 1 graph and 2 Soviet references.

ASSOCIATION: Institut teploenergetiki AN UkrSSR (Institute of Thermal Power Engineering of the AS UkrSSR)

Card 1/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

21-58-5-15/28

On the Character of Variation of the Summary Friction Coefficient of Gas Flow in a Cylindrical Tube in the Neighborhood of Maximum Regime

PRESENTED: By Member of the AS UkrSSR, I.T. Shvets

SUBMITTED: October 14, 1958

NOTE: Russian title and Russian names of individuals and institutions appearing in this article have been used in the transliteration.

1. Gas flow--Mathematical analysis

Card 2/2 Author — Institut Teploenergetiki AN USSR.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORFMAN, A.Sh., kand.tekhn.nauk; POL'SKIY, N.I., kand.fiz.-mat.nauk; ROMANENKO, P.N., prof., doktor tekhn.nauk

Simulating solutions of laminar boundary-layer equations of a compressible liquid associated with heat exchange. Nauch.trudy. MIIT no.9:165-174 '58. (MIRA 11:12)
(Boundary layer) (Differential equations)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

Dept MAP A. Sh

PHASE I BOOK EXPLOITATION SOV/3898
SOV/31-M-14

Akademiya nauk UkrSSR. Institut teploenergetiki

Teploobmen i gidrodinamika (Heat Transfer and Hydrodynamics) Kiyev, 1958. 190 p. (Series: Its: Shornik trudov, no. 14) 2,000 copies printed.

Eds. of Publishing House: Ya.L. Kaplan and M.M. Lakirova; Tech. Ed.: M.I. Yefimova; Editorial Board: I.T. Shvets (Resp. Ed.), Academician, Academy of Sciences UkrSSR; G.M. Shchegolev (Deputy Resp. Ed.), Candidate of Technical Sciences; M.M. Kondak (Resp. Secretary); Candidate of Technical Sciences; V.I. Polubinskiy, Corresponding Member, Academy of Sciences UkrSSR; I.I. Gimmelfarb, Candidate of Technical Sciences; M.M. Kazarnovskiy, Candidate of Technical Sciences; Doctor of Technical Sciences; P.I. Larvov, Professor; and M.N. Pratyushkin, Candidate of Technical Sciences.

PURPOSE: This collection of articles is intended for scientific workers and technical personnel in the fields of heat transfer and hydrodynamics.

COVERAGE: This collection of 18 articles deals with experimental and theoretical studies of problems in heat transfer and hydrodynamics as they affect steam and gas turbines and heat-transfer devices. The results of theoretical investigations of heat transfer in turbine components and in elements of heat-utilizing apparatus are described, and new calculation methods are suggested. Several problems of the thermodynamics and aerodynamics of steam and gas turbines are discussed. References follow each article.

TABLE OF CONTENTS:

Shvets, I.T., O.A. Gerashchenko, and M.F. Dyban. Investigation of the Temperature Fields in the Rims of Turbine Rotors by Means of the Thermal-Analogy Method 3

On the basis of a theoretical analysis of the system of equations describing the temperature field of a bladed rotor, the authors present a method for taking into account the thermal resistance of the blade stems. This method may be used for calculations of steady-state heat conditions as well as unsteady-state conditions.

Kaplan, Ya.L. Simple Calculation Method for a Laval Nozzle 26

The author presents the results of an experimental study of the process of heat transfer during the condensation of steam. A detailed description of the experimental apparatus and the methods employed is given, as well as a qualitative description of the physical phenomena involved in the process of condensation on the basis of the results obtained.

Zorina, N.V. Methods for Investigation and the Theory of the Process of Heat Transfer During the Condensation of Steam 32

Polubinskiy, V.I. Relative Velocity of Steam in the Case of High Steam Content of a Two-Phase Flow 43

Kuznetsov, O.A., and Z.V. Seliet. Investigation of the Heat and Mass Exchange in a Model of a Ventilator-Type Cascade Water Cooler 53

Kuznetsov, O.A., and T.N. Onik. Investigation of a Model of a Mine-Shaft Air Cooler With Nozzle-Type Atomization of the Coolant 60

The authors present the results of an experimental study of a model of a mine-shaft air cooler. Results are presented of the effects of the degree of watering, the velocity of the air, wet and dry bulb temperatures, and other parameters involved in the cooling process.

Shkapovskiy, L. Investigation of Heat-Exchange Processes in Evaporative-Cooling Equipment for Crane-Operator Cabs in Work Shops With High Temperatures 73

The author describes an evaporative cooler for a crane operator's cab and presents a study of the evaporative cooling process. The heat calculation of the cab enclosure is treated, and attention is given to the translation of radiant heat through the glass windows under different cooling conditions.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORFMAN, A. Sh.

PHASE I BOOK EXPLOITATION SOV/3898
SOV/21-58-4-14

Akademiya nauk UkrSSR. Institut teploenergetiki

Teploobmen i gidrodinamika (Heat Transfer and Hydrodynamics) Kiyev, 1958. 190 p. (Series: Its: Shornik trudov, no. 14) 2,000 copies printed.

Eds. of Publishing House: Ya.L. Kaplan and N.M. Labinova; Tech. Ed.: N.I. Yefimova; Editorial Board: I.T. Shvets (Resp. Ed.), Academician, Academy of Sciences UkrSSR; G.M. Shchegolev (Asst. Secretary), Candidate of Technical Sciences; N.M. Kondak (Resp. Sec.); Candidate of Technical Sciences; V.I. Tolubinskiy, Corresponding Member, Academy of Sciences UkrSSR; I.I. Chernobyl'skiy, Doctor of Technical Sciences; A.N. Mikhaylenko, Candidate of Technical Sciences; P.I. Lavrov, Candidate of Technical Sciences; and N.M. Pyatyshkin, Candidate of Technical Sciences; Professor; and N.M. Pyatyshkin, Candidate of Technical Sciences.

PURPOSE: This collection of articles is intended for scientific workers and technical personnel in the fields of heat transfer and hydrodynamics.

COVERAGE: This collection of 18 articles deals with experimental and theoretical studies of problems in heat transfer and hydrodynamics as they affect steam and gas turbines and heat-transfer devices. The results of theoretical investigations of heat transfer in turbine components and in elements of heat-utilizing apparatus are described, and new calculation methods are suggested. Several problems of the thermodynamics and aerodynamics of steam and gas turbines are discussed. References follow each article.

Dolinskiy, S.A. Investigation of the Amount of Heat Given off When Aqueous Solutions of Lithium Bromide and Lithium Chloride are Boiled Under Vacuum 97
The paper deals with a study of the heat-transfer coefficient for aqueous solutions of LiBr and LiCl under conditions of boiling under vacuum. The effects of the concentration of the solution, the ambient pressure, and other parameters are determined.

Bronnik, I.Ye. Approximate Method of Calculating Velocity and Temperature Fields for the Case of Laminar Flow of a Compressible Fluid With Heat-Transfer Around an Object 108

Polikhy, M.I. On the Possibility of Reducing the Differential Equations of a Laminar Boundary Layer to Ordinary Differential Equations 117

Kostiuk, P.G., and V.I. Pechuk. Aerodynamic Investigations of the System of Intercylinder Exchange of Steam in Powerful Steam Turbines 122
The authors present the results of model tests to study intercylinder exchange in steam turbines. The study is primarily concerned with the hydraulic losses encountered. Recommendations for reducing the internal drag of the system are presented.

Gashenok, I.I. Effect of Manufacturing Defects on End Losses in the Guide Vanes of Welded Turbine Diaphragms 134

Gorbatyy, Yu.P., A.Sh. Dorfman, and M.I. Saykovskiy. Effect of Reactivity and Pitch on the Magnitude of the Profile Losses in Cascades 148

Saykovskiy, M.I., and A.Sh. Dorfman. Criteria for Estimating the Efficiency of Intake Nozzles 159

Yeremenko, A.S., and A.P. Fedosenko. Losses in Turbine Guide Vanes of the Cascade Type 167

Yeremenko, A.S., and A.P. Fedosenko. Investigation of the Losses in Turbine Blade Cascades 174
The above two papers deal with an investigation of the losses in turbine guide vanes of the cascade type. The efficiency of the cascade is determined as a function of the inflow angle, blade-incidence angle, blade pitch, and other parameters.

Shvets, I.T., V.M. Sidun, and L.I. Romanyuk (Deceased). Experimental Investigation of the Heat Conductivity of Soils Used in Greenhouses and Shields 186

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Card 7/7

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

28330 S/124/61/000/005/016/032
A005/A130

10 5100

AUTHORS: Dorfman, A. Sh., Pol'skiy, N. I., Romanenko, P. N.

TITLE: Self-simulating solutions of equations for the laminar boundary layer in a compressible fluid in the presence of heat exchange

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 5 1961, 73, abstract 5B457. (Nauchn. tr. Mosk. lesotekhn. in-t, 1958, no. 9, 165 - 174)

TEXT: The authors give a compendium of all possible self-simulating solutions of the problem of a laminar compressible boundary layer with a pressure gradient and heat exchange; they apply Dorodnitsyn variables. For a Prandtl number $P \neq 1$, self-simulating can be obtained only under the conditions $u_1 = \text{const}$ and $T_w = \text{const}$ (u_1 is the velocity outside the layer, T_w is the wall temperature). For $P = 1$, self-simulating solutions are possible only in cases when

1) $u_1 = \text{const}$, $T_w = (\rho + c)^n$

2) $u_1 = (a\xi + b)^n$, $T_w = \text{const}$

3) $u_1 = ae^{b\xi}$, $T_w = \text{const}$

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A005/A130

Self-simulating solutions of equations for...

(ξ is the Dorodnitsyn variable, A, a, b, c are constants). There are 7 references.

Ye. Obroskova

[Abstracter's note: Complete translation]

Card 2/2

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

GORBATYY, Yu.P.; DORFMAN, A.Sh.; SAYKOVSKIY, M.I.

Reactivity and pitch effect on the magnitude of profile losses in the cascades. Trudy Inst. teepl. AN UESR no.14:148-158 '58. (MIRA 12:4)

(Turbines)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORFMAN, A.Sh.

82131
S/124/60/000/002/006/012

26.5000

Translation from: Referativnyy zhurnal, Mekhanika, 1960, No. 2, p. 49, # 1929

AUTHORS: Saykovskiy, M.I., Dorfman, A.Sh.

TITLE: On Criteria for Evaluating the Quality of Branch Pipes

PERIODICAL: Sb. tr. In-t teploenerg. AN UkrSSR, 1958, No. 14, pp 159 - 166

TEXT: The influence of losses in branch pipes on the turbine power is considered, and the evaluation criterion of the branch pipe quality is derived:

$$\beta_{\text{inlet}} = \left[1 + \frac{x}{x+1}\lambda_3^2 \zeta_{\text{inlet}} \left(1 - \frac{x-1}{x+1}\lambda_3^2\right)^{\frac{1}{x-1}}\right]^{-1}$$

for the inlet branch pipe, and

$$\beta_{\text{outlet}} = \left[1 - \frac{x}{x-1}\lambda_3^2 \zeta_{\text{outlet}} \left(1 - \frac{x-1}{x+1}\lambda_3^2\right)^{\frac{1}{x-1}}\right] \left(1 - \frac{x-1}{x+1}\lambda_4^2\right)^{\frac{x}{x-1}}$$

for the outlet branch pipe. Here are: $\lambda = c/a_*$ is the reduced velocity, $\zeta = \Delta p_0 / 0.5 \rho c^2$ is the resistance coefficient of the branch pipe, x is the adiabatic exponent, c is the velocity in the narrow section of the branch pipe, a_* is the critical velocity, Δp_0 are the losses of total pressure in the branch pipe, $\lambda_2, \lambda_3, \lambda_4$ are the reduced velocities at the turbine inlet, the turbine

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On Criteria for Evaluating the Quality of Branch Pipes

outlet, and at the outlet section of the outlet branch pipe respectively. The value β characterizes the drop lowering within the turbine by the branch pipes. It is represented by the ratio of the pressure drop lost in the turbine to the drop in a hypothetical case, when the losses in the branch pipes and also the losses due to the outlet velocity λ_4 do not exist. The authors come to the conclusions: 1). The quality of the branch pipe should be determined by the value of β; 2) the more convenient value $\zeta_* = \Delta p_c/(0.5\rho a_*^2) + \lambda_4^2$ may be used instead of β when the velocities are small and the losses are low; 3) the usually used loss coefficient may be employed as evaluation criterion only for a comparison of branch pipes having equal reduced velocities in their narrow sections. There are 5 references.

A. M. Pavlenko

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APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

AUTHOR: Dorfman, A.Sh., Pol'skiy, N.I., and Romanenko, P.N. (Kiev) 40-22-2-19/21

TITLE: Similar Solutions of the Equations of a Laminar Boundary Layer in a Compressible Liquid in Presence of Heat Exchange (Avtomodel'nyye resheniya uravneniy laminarnogo pogranichnogo sloya v szhimayemoy zhidkosti pri nalichii teploobmena)

PERIODICAL: Prikladnaya matematika i mekhanika, 1958, Vol 22, Nr 2, pp 274-279 (USSR)

ABSTRACT: For the solution of different problems of boundary layer theory the partial differential equations were frequently transformed into ordinary ones. In this way it was possible to find similar solutions of the boundary layer theory. For the case of an incompressible liquid without heat exchange these similar solutions have been completely treated. For the case of the plate boundary layer also similar solutions for compressible liquids have become known. In the present paper the authors now investigate the case of a compressible liquid and in doing so they assume the existence of heat exchange. All similar solutions of the boundary layer equation for this case are enumerated, and it is shown that further similar solutions do

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

Similar Solutions of the Equations of a Laminar Boundary Layer 40-22-2-19/21
in a Compressible Liquid in Presence of Heat Exchange

not exist.
Starting from the well-known boundary layer equations the system of initial equations is brought to a simpler form with the aid of a transformation given by Dorodnitsyn. For the case that the Prandtl number is = 1 , the system of equations is split up into the following equations :

$$\varphi''' + 2\varphi\varphi'' = 0$$

$$g'' + 2\varphi g' + 4n\varphi' g = 0 \quad .$$

The first of these equations is the well-known Blasius equation for the stream potential φ. The second equation renders it possible to determine the course of the temperature in the boundary layer. It can be solved with the aid of well-known methods, e.g. with the method of Galerkin.
It has to be emphasized that in the present case the notion of similarity refers to the coordinates of Dorodnitsyn. This similarity is not always identical with the similarity in the plane of the initial magnitudes.
There are 7 references, 3 of which are Soviet, 3 American, and 1 German.

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. Similar Solutions of the Equations of a Laminar Boundary Layer in a Compressible Liquid in Presence of Heat Exchange 40-22-2-19/21

SUBMITTED: January 12, 1957

1. Laminar boundary layer--Mathematical analysis 2. Laminar boundary layer--Heat transfer

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

AUTHOR: Dorfman, A.Sh. (Kiev) SOV/40-22-3-16/21

TITLE: On the Calculation of the Laval Nozzle (O rashete sopla Lavalya)

PERIODICAL: Prikladnaya matematika i mekhanika, 1958, Vol 22, Nr 3, pp 399 - 404 (USSR)

ABSTRACT: Several authors have shown that for the construction of shockless plane parallel Laval jets in the domain around the narrowest cross section only the main term of the equation given by Chaplygin must be considered. This main term was given either as a combination of two hypergeometric functions or also in the form of a polynomial of third degree. For these simplifications it was possible only to calculate with sufficient exactness the flow in the direction near the sound transition surface. In the present paper the author tries to avoid the imperfections of the hitherto existing calculation methods by going back to the initial equation of Chaplygin and by carrying out, without neglect of terms, an approximate solution in the surroundings of the sound transition domain. The solution thus obtained is valid for a considerably larger domain below the sound transition

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surface than the results given up to now.
The method is applied for the calculation of the supersonic part of a Laval jet, the flow of which in the subsonic part possesses the form :

$$(0.1) \qquad \psi = -B_1\theta - B_2 \sum \frac{Z_{Bn}(\tau)}{Z_{Bn}(\tau^*)} \frac{\sin \frac{2}{3}Bn\theta}{n^{4/3}} \qquad \tau = \frac{v^2}{\frac{k+1}{k-1} a_*^2}$$

In this formula B, B_1, B_2 are constants, Z_{Bn} are the Chaplygin functions, v is the velocity of flow, a_* is the is the critical velocity of sound, k is the adiabetic exponent.

Applying nondimensional coordinates a flow can be constructed which simultaneously holds for jets of different magnitude. The results of the calculation were represented in a diagram in which the flow lines and the lines of equal velocity of flow are registered.
There are 4 figures, and 2 Soviet references.

SUBMITTED: June 26, 1956

Card 2/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORFMAN, A. Sh

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Translation from: Referativnyy zhurnal, Mekhanika, 1960, No. 2, p. 49, # 1928

AUTHORS: Gorbatyy, Yu.P., Dorfman, A.Sh., Pol'skiy, N.Y., Saykovskiy, M.I.

TITLE: Aerodynamic Investigation of Exhaust Branch Pipe Models of a Gas Turbine

PERIODICAL: Sb. prats'. In-t teploenerg. AN UkrSSR, 1959, No. 16, pp. 25 - 34 (Ukr., Russ. summary)

TEXT: Results of an aerodynamic investigation of models of a gas turbine exhaust branch pipe are presented. The branch pipe consists of a radical ring diffuser, being the main part of the branch pipe, the snail, and the diffuser outlet duct. Some variants of the branch pipe were examined with diffusers having different widening ratios. It turned out that the optimum widening ratio of the diffuser is close to three. The loss factor of this branch pipe proved to be $\xi_{loss} = 0.53$ (taking into account the losses with outlet velocity). The mounting of annular guide surfaces within the diffuser, aiming at a decrease in the diffuser opening angle, leads to a noticeably lowered loss. The application of such surfaces led in the present case to a decrease of the ξ_{loss} value down to 0.45 and to a pressure recovery factor $\varphi = 0.59$ (at the Mach number 0.4 at the branch pipe entrance).

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V.Kh. Abiants

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SAYKOVSKIY, M.I., kand.tekhn.nauk; DORFMAN, A.Sh., kand.tekhn.nauk; GORBATYY, Yu.P., kand.tekhn.nauk

Selecting pitches for turbine bladings. Energomashinostroenie 5 no.3: 35-37 Mr '59. (MIRA 12:3)
(Turbines)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

10(3, 6) SOV/170-59-4-2/20

AUTHORS: Dorfman, A.Sh., Pol'skiy, N.I., Saykovskiy, M.I.

TITLE: On One Characteristic of Local Expansion of Diffusor Channels (Ob odnoy kharakteristike lokal'nogo rasshireniya diffuzornykh kanalov)

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1959, Nr 4, pp 8-14 (USSR)

ABSTRACT: The problem of determining the losses in diffusor channels of arbitrary configuration is at present very difficult as the nature of their origin is complicated. The authors attempt to establish one very general characteristic suitable for investigating diffusors of any shape and demonstrate its applicability to the study of radial-ring diffusors of gas turbine exhaust pipes. They introduce a concept of the local expansion angle of an arbitrary diffusor defined as follows:

$$\theta = 2\,\mathrm{arctg}\left\{\frac{1}{u}\,\frac{dF}{ds}\right\}$$

where u is the circumference of a section being equal to πD; F is the area of the local cross section, and s is the lengthwise coordinate. This concept makes it possible to apply the results obtained in investigations of conic-shaped diffusors

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On One Characteristic of Local Expansion of Diffusor Channels

to those of more complicated configurations. The authors consider the case of a radial-ring diffusor and solve the direct problem of finding the formula for determining its expansion angles and the inverse problem of designing the radial-ring diffusor according to a given function of expansion angle distribution along the diffusor. On the basis of their analysis they designed radial-ring diffusors for small-size exhaust pipes of gas turbines. They recommend that the values of expansion angle should be approximately 8 to 10° in the beginning of the diffusor. The conclusions drawn by the authors were confirmed by a series of experiments performed in the Gas Dynamics Laboratory of the Institute of Thermal Power Engineering of the AS UkrSSR.
There are: 1 schematic diagram, 1 graph, 1 table and 2 Soviet references.

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On One Characteristic of Local Expansion of Diffusor Channels

ASSOCIATION: Institut teploenergetiki AN USSR (Institute of Thermal Power Engineering of the AS UkrSSR), Kiyev

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DOBF'MAN, Abram Shlemovich; NAZARCHUK, Mikhail Mikhaylovich; POL'SKIY, Naftul Iosifovich; SAYKOVSKIY, Mikhail Il'ich; SHVETS, I.T., akademik, red.; KISINA, I.V., red.izd-va; RAKHLINA, N.P., tekhn.red.

[Aerodynamics of diffusors and exhaust nozzles of turbomachines] Aerodinamika diffuzorov i vykhlopnykh patrubkov turbomashin. Pod red. I.T.Shvetsa. Kiev, Izd-vo Akad.nauk USSR, 1960. 187 p. (MIRA 13:6)

1. AN USSR (for Shvets).
(Turbomachines)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DOBFMAN, A.Sh.; SAYKOVSKIY, M.I. [Saikovs'kyi, M.I.]

Determining the parameters of a gas leaving a gas turbine. Zbir. prats' Inst.tepl. AN URSR no.16:61-66 '59. (MIRA 13:10)
(Gas turbines)

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PHASE I BOOK EXPLOITATION SOV/4219

Dorfman, Abram Shlemovich, Mikhail Mikhaylovich Nazarchuk, Naftul Iosifovich Pol'skiy and Mikhail Il'ich Saykovskiy

Aerodinamika diffuzorov i vykhlopnykh patrubkov turbomashin (Aerodynamics of Diffusers and Exhaust Outlets of Turbines) Kiyev, Izd-vo AN UkrSSR, 1960. 188 p. Errata slip inserted. 3,000 copies printed.

Sponsoring Agency: Akademiya nauk Ukrainskoy SSR. Institut teploenergetiki.

Ed. of Publishing House: I. V. Kisina; Tech. Ed.: N. P. Rakhlina.

PURPOSE: This book is intended for scientists and engineers working in the field of applied gas dynamics. It will also be of interest to turbine designers.

COVERAGE: The book presents methods for calculating gas flows in straight-sided and curved-contour diffusers and develops methods for designing turbine exhaust nozzles. Methods of experimental investigation of nozzles are considered as well as the effect of nozzle losses on the efficiency of the turbines. The book outlines the basic results of a study of the flows of viscous incompressible fluids

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in straight-sided and conical diffusers, studies in detail viscous gas flow in conical diffusers, and puts forth a method for calculating flow losses and flow parameters. The concept of the local expansion angle of a diffuser which permits using the results of the investigation of conical diffusers for the evaluation of the losses in several types of curved-contour diffusers is introduced. Particular attention is given to the study of annular diffusers. The authors state that a considerable part of the data given in this book appears for the first time. No personalities are mentioned. There are 39 references: 37 Soviet, 2 German.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORFMAN, A.Sh., kand.tekhn.nauk; SAYKOVSKIY, M.I., kand.tekhn.nauk

Thermally insulated flow of viscous gas in a diffuser. Teploenergetika 7 no.6:77-82 Je '60. (MIRA 13:8)

1. Institut teploenergetiki AN SSSR.
(Fluid dynamics)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

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S/170/61/004/006/004/015
B129/B212

AUTHOR: Dorfman, A. Sh.

TITLE: Calculation of the supersonic part of a Laval nozzle

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 4, no. 6, 1961, 51-57

TEXT: An analytical method for calculating the supersonic part of a Laval nozzle is presented. This method permits a simplification of the calculation of the supersonic part of a Laval nozzle by omitting the complicated graphical method. Nozzles with smooth walls and such with edges are considered (Fig. 1). The analytical calculation of the supersonic part of the nozzle is done by the approximation method of S. A. Khristianovich. The stream function is set up as $\psi = (f_1(\lambda) + f_2(\mu))/(\lambda + \mu + 0.185)$ (1), which holds in the triangle BB'C and where λ and μ denote characteristic coordinates and f_1 and f_2 arbitrary functions. For the case in question the relation $f_1 = -f_2$ is found; f_2 is determined by using the equation

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$$df_2 = \psi_B d\mu + \frac{1}{2}(s_B + \mu + 0.185)d\psi_B + d\varphi_B/37(s_B + \mu + 0.185) \quad (2).$$

A previous paper (PMM, v. 22, no. 3, 1958) shows that the relations

$$\lambda = s_B(\mu) = \sigma_B - \mu, \quad (3)$$

$$2\mu = \sigma_B + \sqrt{h_*^3 \Phi_*^3}\left(t_B \lg\frac{A\psi_B}{\sqrt{\Phi_* h_*^3}} - \frac{A\psi_B}{\sqrt{\Phi_* h_*^3}}\right), \quad (4)$$

$$-A\varphi_B = h_*^3 \Phi_* \ln\frac{1}{t_B}\cos\frac{-A\psi_B}{\sqrt{h_*^3 \Phi_*}}, \quad (5)$$

are valid if the lines BB' represent lines of constant velocity ($M \leq 1.5$). ψ_B denotes the stream function and φ_B the potential function on BB', $s_B(\mu) = \lambda$. σ_B represents the value of $\sigma = \mu + \lambda$ on the line BB' and σ is a unique function of the Mach number M. t_B denotes a certain function of

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Calculation of the supersonic ...

M on BB', h_*, Φ_*, and $A = C\Phi_* h_*^3$ denote constants. Formulas are brought for the functions $\bar{F}_2(\lambda)$ and $\bar{F}_2'(\lambda)$ shown in Fig. 2 ($\mu = \lambda$). The dimensionless stream function $\bar{\psi}$ is obtained from (1) by substituting f_1 and f_2 by $\bar{f}_1$ and $\bar{f}_2$. Now it is easy to find the characteristic lines of the flow for a known stream function. Proceeding from the relations $dx = \frac{1}{v}\cos\theta d\varphi + (\rho_0/\rho v)\sin\theta d\psi$ and $dy = \frac{1}{v}\sin\theta d\varphi + (\rho_0/\rho v)\cos\theta d\psi$ formulas

$$\bar{x} - \bar{x}_0 = -10{,}34\int_0^{\bar{\psi}}(H\cos\theta + q\sin\theta)\,d\bar{\psi};\quad \bar{y} = 10{,}34\int_0^{\bar{\psi}}(q\cos\theta - \quad) \text{ and}$$

$$-H\sin\theta)\,d\bar{\psi}, \qquad (8)$$

$$\bar{x} - \bar{x}_0 = 10{,}34\int_0^{\bar{\psi}}(H\cos\theta - q\sin\theta)\,d\bar{\psi};\quad \bar{y} = 10{,}34\int_0^{\bar{\psi}}(q\cos\theta +$$

$$+H\sin\theta)\,d\bar{\psi}. \qquad (9)$$

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are obtained for the coordinates of the characteristic in the triangle BB'C if μ = constant and λ = constant, respectively. $\bar{x} = -Aa_* x$ and $\bar{y} = -Aa_* y$ denote dimensionless coordinates, a the critical velocity. For the quadrangle CKDK' the stream function is given as $\bar{\psi} = (\bar{F}_1(\lambda) + \bar{F}_2(\mu))/(\lambda + \mu + 0.185)$ with $\bar{F}_1 = -\bar{F}_2$; Fig. 3 shows a graphical representation of these two terms.

$$\bar{x} - \bar{x}_{BC} = 37 \int_{\mu_{BC}}^{\mu} Q \cos\theta (\bar{F}_2' - \bar{\psi})\, d\mu;$$
$$\bar{y} - \bar{y}_{BC} = 37 \int_{\mu_{BC}}^{\mu} Q \sin\theta (\bar{F}_2' - \bar{\psi})\, d\mu, \qquad (12)$$

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is obtained for the lines of flow, where Q is determined to be $Q = 0.559\sin(\sigma + 0.332)$. Finally, the rate of change of the velocity along the axis of the nozzle is discussed in detail and also the nozzle length is studied. F. I. Frankel' is mentioned. There are 4 figures and 4 Soviet-bloc references.

ASSOCIATION: Institut teploenergetiki AN USSR (Heat Energy Institute of the AS UkrSSR)

SUBMITTED: October 27, 1960

Card 5/8

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

S/096/62/000/006/010/011
E032/E314

26.2110

AUTHORS: Virozub, I.Ye., Engineer and Dorfmann, A.Sh., Candidate of Technical Sciences

TITLE: On the optimum form of a diffusor

PERIODICAL: Teploenergetika, no. 6, 1962, 38 - 91

TEXT: The authors are concerned with an axially symmetric diffusor of given length and degree of divergence. The diffusor is assumed to have curvilinear generators and therefore the problem is more general than that discussed by other workers so far. It is shown that the optimum form may be reduced to the determination of a curve $R = R(x)$ which is such that the integral

$$\zeta = 4 \int_0^L \varphi(R')R' \frac{R^2 - 1}{R^5} dx \qquad (6)$$

is a minimum, where R is the radius of the diffusor at a distance x along the axis, $R' = dR/dx$ and φ is a function describing the ratio of losses due to divergence to losses due

Card 1/2

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S/096/62/000/006/010/011
On the optimum form of a diffusor E032/E314

to impact. It is shown that this variational problem does not have a solution for which R(x) is a differentiable curve. It is therefore concluded that the profile of the diffusor with a minimum loss is not a smooth curve but contains two discontinuous changes in the cross-sectional area: one at the entrance and one at the exit. Explicit formulae are derived for the shape of the profile. They are found to be in qualitative agreement with published experimental data for plane diffusors. It is pointed out in conclusion that although frictional effects are neglected in this analysis, they should have little effect on the final formulae. There are 8 figures.

ASSOCIATION: Institut teploenergetiki AN UkrSSR
(Institute of Heat Engineering, AS UkrSSR)

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APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORFMAN, A.Sh. (Kiev):

"Approximate integration of the equations of the laminar boundary layer subject to an arbitrary velocity distribution law in a potential flow."

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

DORFMAN, A.Sh.; SAYKOVSKIY, M.I.

Determining the optimum shape of a diffuser in detached flow with an arbitrary mean line. Inzh.-fiz. zhur. no.12:88-94 D'63. (MIRA 17:2)

1. Institut teploenergetiki AN UkrSSR, Kiyev.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

TOLUBINSKIY, V.I., otv. red.; FEDOSEYEV, V.A., doktor fiz.-mat. nauk, zam. otv. red.; DORFMAN, A.Sh., kand. tekhn. nauk, red.; DUSHCHENKO, V.P., kand. fiz.-mat. nauk, red.; DYBAN, Ye.P., kand. tekhn. nauk, red.; KREMNEV, O.A., doktor tekhn. nauk, red.; NAZARCHUK, M.M., kand. tekhn. nauk, red.; ORNATSKIY, A.P., kand. tekhn.nauk, red.; PAVLOVICH, V.P., doktor tekhn. nauk, red.; SHVETS, I.T., kand. tekhn. nauk, red.; SHCHEGOLEV, G.M., kand. tekhn. nauk, red.; SHCHERBAN', A.N., akademik, red.; SYTNIK, N.K., red.

[Thermophysics and heat engineering] Teplofizika i teplotekhnika. Kiev, Naukova dumka, 1964. 339 p.
(MIRA 18:1)

1. Akademiya nauk URSR, Kiev. Instytut tekhnichnoy teplofizyky. 2. Institut tekhnicheskoy teplofiziki AN Ukr.SSR, Kiev (for Dorfman, Dyban, Nazarchuk, Tolubinskiy, Shchegolev). 3. Kiyevskiy tekhnologicheskiy institut pishchevoy promyshlennosti (for Dushchenko, Pavlovich). 4. Kiyevskiy politekhnicheskiy institut (for Ornatskiy).

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410930008-6

TOLUBINSKIY, V.I.--- (continued). Card 2.

5. Odesskiy universitet (for Fedoseyev). 6. Kiyevskiy universitet (for Shvets). Akademiya nauk Ukr.SSR (for Shcherban', Shvets). 7. Chlen-korrespondent AN Ukr.SSR (for Tolubinskiy). 8. Gosudarstvennyy komitet Soveta Ministrov po koordinatsii nauchno-issledovatel'skikh rabot (for Shcherban').

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L 41078-65 EPA/EWT(1)/EWP(m)/EWA(d)/EWP(t)/EWP(n)-2/EPR/T-2/EPA(bb)-2/FCS(k)/EWA(1)
Pd-1/Paa-4/Ps-1/Pi-4 MW
ACCESSION NR: AP5005835 S/0114/65/000/002/0017/0020 41

AUTHOR: Dorfman, A. Sh. (Candidate of technical sciences); Saykovskiy, M. I. (Candidate of technical sciences); Didenko, O. I. (Engineer); Stepanenko, A. P. (Engineer)

TITLE: Results of aerodynamic testing of pipe models of GT-6-750 gas-turbine plant

SOURCE: Energomashinostroyeniye, no. 2, 1965, 17-20

TOPIC TAGS: gas turbine, exhaust duct, inlet duct / GT-6-750 gas turbine

ABSTRACT: Results of the designing and aerodynamic testing of models of the turbine exhaust duct and compressor inlet duct are reported. Five variants of the exhaust duct (dimensions tabulated) were tested by integral methods within 0.1—0.35 Mach number at the diffuser inlet. Plots of the relative restorations of static pressure vs. the Mach number are presented. Two variants — with bottom

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and diagonal entrances -- of the inlet ducts were tested; each variant had two modifications (0.73 and 0.71 hub-tip ration). It is found that: (1) Increasing the axial dimension of the exhaust duct to a certain limit results in its higher efficiency; (2) A suitable diffuser profile can ensure duct efficiency without the use of separators; (3) Losses in all variants are rather low, being lower in diagonal-entrance arrangements than in bottom-entrance ones. Other specific findings re various variants are reported. Orig. art. has: 5 figures, 4 formulas, and 2 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: PR

NO REF SOV: 001 OTHER: 000

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L 39292-65 EWT(l)/EWP(m)/EWA(d)/FCS(k)/EWA(l) Pd-l
ACCESSION NR: AP5010079 UR/0170/65/008/004/0536/0539

AUTHOR: Dorfman, A. Sh.; Nazarchuk, M. M.; Pol'skiy, N. I.; Saykovskiy, M. I. 24 23 B

TITLE: Calculation of diffusor losses

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 8, no. 4, 1965, 536-539

TOPIC TAGS: diffusor, conical diffusor, curvilinear diffusor, diffusor calculation, diffusor loss

ABSTRACT: Methods of diffusor calculation are briefly reviewed and difficulties in the calculation of wide-angle diffusors with flow separation are stressed. Formulas for the calculation of friction and expansion losses in conical diffusors without flow separation based on the analogy with the flow in pipes are given. The approach to this problem by various authors is described and analyzed. The authors of this article view favorably the attempts to apply the general notions of aerodynamics to the determination of losses in curvilinear diffusors. They also express the opinion that along with the establishment of a general method of calculating viscous fluid flow, engineering calculating methods based on generalized experimental results should be introduced. Orig. art. has: 4 figures. [AC]

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